

# Mineral Industry Surveys

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## MANGANESE IN OCTOBER 2005

On a preliminary, gross-weight basis, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 32,000 metric tons (t) in October 2005, which was an 8% increase from that in September 2005, according to the U.S. Geological Survey. This figure increases to 34,400 t when estimates for annual respondents are added on the basis of 2004 data. Corresponding industry stocks of ore at the end of the month were 344,000 t, which include an estimate for annual respondents on the basis of 2004 data. This was a 17% increase over stocks at the end of September.

Foreign trade data for October will appear in a subsequent report. The following comparisons of trade data were made on the basis of manganese content. The data for September 2005 tabulated in this report indicate that the total exports of 1,480 t were 8% lower than those of the prior month, owing to decreases in exports of ferromanganese, silicomanganese, and manganese metal. Manganese imports were 73,600 t, which was an increase of 50% compared with those of August. The increase in manganese imports was due to increases in ferromanganese and manganese ore imports.

### Ferroalloy Prices, manganese content

	High-carbon ferromanganese <sup>1</sup> (dollars per gross ton)	Medium-carbon ferromanganese <sup>1</sup> (cents per pound)	Silicomanganese <sup>1</sup> (cents per pound)	Manganese metal <sup>2</sup> (cents per pound)
October 6	540.00-550.00	47.00-54.00	38.00-40.00	82.00-85.00
October 13	550.00-560.00	46.00-54.00	38.00-40.00	82.00-85.00
October 20	550.00-560.00	46.00-54.00	38.00-40.00	82.00-85.00
October 27	560.00-570.00	46.00-54.00	38.00-40.00	82.00-85.00

### Ore Prices, dollars per metric ton unit, manganese content<sup>3</sup>

	44% Manganese Ore <sup>2</sup>	48% Manganese Ore <sup>2</sup>
October 6	1.90-2.00	2.40-2.60
October 13	1.90-2.00	2.40-2.60
October 20	1.90-2.00	2.40-2.60
October 27	1.90-2.00	2.40-2.60

<sup>1</sup>Source: Platts Metals Week, dealer import price.

<sup>2</sup>Source: Ryan's Notes, North American transaction price.

<sup>3</sup>To determine dollars per metric ton, multiply the manganese content percentage by the price.

TABLE 1  
SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

(Metric tons, manganese content)<sup>2</sup>

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2004:						
September	25,200	54,700	79,900	2,580	497	3,080
January-September	171,000	437,000 <sup>r</sup>	608,000 <sup>r</sup>	32,700	6,290	39,000
2005:						
January	7,650	45,000	52,600	162	955	1,120
February	40,700	29,000	69,700	111	1,170	1,280
March	22,300	42,000	64,300	206	1,160	1,360
April	38,400	39,900	78,300	2,350	778	3,130
May	16,500	47,400	64,000	364	1,380	1,740
June	19,500	41,000	60,500	272	1,550	1,820
July	21,000	40,000	61,000	197	934	1,130
August	23,800	25,400	49,100	234	1,360	1,600
September	41,800	31,700	73,600	564	911	1,470
Total	232,000	341,000	573,000	4,460	10,200	14,700

<sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

Source: U.S. Census Bureau.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN SEPTEMBER 2005<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	1,000	661	\$518,000	26,300	17,500	\$15,500,000
Canada	--	--	--	350	311	195,000
France	--	--	--	2	1	2,860
Georgia	--	--	--	6,500	4,950	4,290,000
Kazakhstan	--	--	--	20	13	17,500
Korea, Republic of	--	--	--	216	156	305,000
Mexico	4,600	3,110	2,720,000	18,200	12,100	13,100,000
Norway	163	96 <sup>3</sup>	167,000	48,800	30,700	48,300,000
Romania	--	--	--	57,100	38,300	41,700,000
Russia	--	--	--	11,400	7,750	9,250,000
South Africa	6,370	4,190	3,630,000	70,800	46,800	44,200,000
Spain	--	--	--	4,000	2,670	2,770,000
Total	12,100	8,050	7,040,000	244,000	161,000	180,000,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN SEPTEMBER 2005<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
China	1,160	965	\$1,810,000	13,100	11,100	\$21,500,000
Japan	--	--	--	1,800	1,450	2,170,000
Korea, Republic of	--	--	--	1,390	1,040	1,480,000
Mexico	1,160	922	1,150,000	5,490	4,400	6,090,000
Netherlands	--	--	--	17	14	29,800
Norway	--	--	--	221	181	369,000
South Africa	140	129	249,000	1,980	1,830	3,630,000
Spain	--	--	--	36	28	41,800
Total, low carbon	2,460	2,020	3,210,000	24,100	20,100	35,300,000
<b>Medium carbon, 1%-2% C:</b>						
China	--	--	--	3,150	2,520	4,490,000
Korea, Republic of	--	--	--	9,000	7,200	7,430,000
Mexico	195	150 <sup>r</sup>	259,000	12,100	9,500	12,600,000
Norway	--	--	--	1,810	1,480	2,610,000
South Africa	2,490	2,090	2,000,000	23,700	19,200	27,000,000
Total, m.c., 1%-2% C	2,680	2,240	2,260,000	49,700	39,900	54,100,000
<b>High carbon:</b>						
Australia	--	--	--	4,460	3,420	2,380,000
Brazil	--	--	--	13,800	10,700	9,720,000
Canada	--	--	--	18	13	17,000
China	--	--	--	7,500	5,720	5,250,000
France	--	--	--	4,100	3,200	2,830,000
Hong Kong	--	--	--	3,360	2,550	1,960,000
Mexico	3	2	3,510	797	623	726,000
South Africa	23,300	18,200	9,680,000	86,500	67,300	50,400,000
Ukraine	--	--	--	2,840	2,230	1,260,000
Total, high carbon	23,300	18,200	9,690,000	123,000	95,700	74,600,000
Grand total	28,400	22,400	15,200,000	197,000	156,000	164,000,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN SEPTEMBER 2005<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
China	--	--	--	5,140	1,050	\$35,100
Gabon	4,000	1,760	208,000	5,660	6,530	1,180,000
Ghana	--	--	--	18	7	2,340
Mexico	--	--	--	5,870	3,240	675,000
Namibia	--	--	--	26,000	10,400	1,950,000
United Kingdom	--	--	--	87	40	6,000
Total	4,000	1,760	208,000	42,800	21,300	3,850,000
<b>47% or more manganese:</b>						
Australia	--	--	--	22,500	11,800	2,810,000
Belgium	--	--	--	114	75	87,300
Brazil	--	--	--	9,000	5,200	1,480,000
China	--	--	--	8,600	4,300	781,000
France	--	--	--	60	56	6,670
Gabon	75,000	37,900	5,600,000	282,000	148,000	21,700,000
Ghana	--	--	--	90	57	4,320
India	--	--	--	85	42	12,800
South Africa	--	--	--	68,000	33,100	7,170,000
Total	75,000	37,900	5,600,000	390,000	203,000	34,100,000
Grand total	79,000	39,700	5,810,000	433,000	224,000	37,900,000

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN SEPTEMBER 2005<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Australia	1,400	\$1,870,000	11,700	\$15,400,000
Belgium	--	--	336	752,000
Brazil	6	9,970	383	434,000
China	1,570	1,800,000	7,200	7,580,000
Germany	2	8,620	78	260,000
Japan	595	843,000	3,470	4,790,000
Poland	7	12,000	7	12,000
Total	3,570	4,540,000	23,200	29,200,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN SEPTEMBER 2005<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>3</sup>	Year to date <sup>2</sup>	
			Gross weight	Customs value <sup>3</sup>
<b>Unwrought flake:</b>				
China	211	\$305,000	9,240	\$13,800,000
Germany	--	--	7	28,200
Hong Kong	18	30,000	18	30,000
South Africa	193	381,000	4,420	7,750,000
Total	422	716,000	13,700	21,600,000
<b>Unwrought powder:</b>				
China	35	66,100	895	1,380,000
South Africa	136	292,000	2,960	5,880,000
Total	171	358,000	3,850	7,260,000
<b>Unwrought, other:</b>				
China	--	--	220	376,000
Germany	228	344,000	2,440	4,670,000
Spain	183	745,000	2,340	5,680,000
South Africa	160	319,000	977	1,870,000
Total	571	1,410,000	5,980	12,600,000
<b>Other manganese, wrought:</b>				
Austria	--	--	1	53,300
Canada	1	12,400	1	12,400
China	20	33,900	320	523,000
France	--	--	22	223,000
Germany	--	--	4	42,300
Mexico	5	8,980	5	8,980
Spain	8	17,200	75	162,000
United Kingdom	--	--	2	7,070
Total	34	72,500	430	1,030,000
Grand total	1,200	2,550,000	23,900	42,500,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes revisions to previous months' data.

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Note: Imports for consumption of metallic manganese waste and scrap totaled 109 tons, all of which was from Canada, to give a year-to-date total of 513 tons.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE,  
SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN SEPTEMBER 2005<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	September	Year to date	September	Year to date	September	Year to date	September	Year to date
Australia	--	--	--	--	--	3	--	7
Belgium	--	--	--	--	--	--	180	914
Brazil	--	--	--	--	--	11	--	19
Canada	189	2,620	560	7,350	--	280	4	241
Chile	--	4	--	1	--	--	5	5
China	902	5,580	--	--	--	--	--	--
Colombia	--	6	--	--	--	--	--	--
Denmark	--	17	--	--	--	--	--	--
France	--	--	--	--	--	101	--	--
Germany	17	137	--	--	--	--	32	276
Hong Kong	--	--	7	7	--	--	1	3
Indonesia	2	39	--	--	--	22	--	5
Italy	--	--	--	--	--	--	--	4
Japan	--	--	--	--	--	--	25	420
Korea, Republic of	--	34	--	--	--	--	--	27
Kuwait	--	83	--	--	--	--	--	--
Mexico	--	101	15	684	2	319	2	180
Netherlands	--	--	--	2	--	22	--	--
New Zealand	--	1	--	--	--	--	--	--
Peru	--	--	--	--	--	--	--	5
Poland	--	193	--	--	--	--	--	--
Russia	--	21	--	--	--	--	--	--
Spain	--	--	--	--	--	8	--	10
Sweden	18	94	--	--	--	--	--	95
Taiwan	--	--	--	--	--	--	--	(3)
Trinidad and Tobago	--	--	--	--	--	--	--	1
Venezuela	--	--	--	--	--	--	--	4
Total	1,130	8,930	581	8,040	2	767	248	2,230

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes manganese-aluminum, some other alloys, and waste and scrap.

<sup>3</sup>Less than 1/2 unit.

Note: Exports of ferromanganese with more than 2% carbon totaled 254 tons, 25 tons went to Canada and 229 tons went to Mexico, to give a year-to-date total of 707 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN SEPTEMBER 2005, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)	Year to date		
				Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	462	\$376	Mexico 299; \$131	3,790	\$2,430	Mexico 1,890; \$781
Manganites, manganates, and other permanganates	--	--	--	38	123	Germany 38; \$123
Potassium permanganate	73	156	Czech Republic 73; \$154	748	1,570	Czech Republic 505; \$1,070
Sodium permanganate <sup>3</sup>	--	--	--	269	649	Germany 135; \$476
Sulfates, basket category, including manganese sulfate	4,680	2,470	Mexico 2,970; \$1,460	33,700	19,800	Mexico 17,500; \$9,160
<b>Exports:</b>						
Manganese dioxide	468	444	Canada 208; \$97	4,350	3,560	Canada 2,610; \$1,180
Manganese oxides other than dioxide	1,260	887	Canada 1,040; \$367	8,780	5,900	Canada 6,340; \$2,320
Manganites, manganates, and other permanganates	2	4	Canada 2; \$4	77	182	Canada 35; \$77
Potassium permanganate	171	392	Australia 48; \$112	4,290	6,100	Spain 1,270; \$2,420
Sodium permanganate <sup>3</sup>	29	116	Hong Kong 13; \$34	469	1,320	Japan 290; \$804
Sulfates, basket category, including manganese sulfate	2,600	1,300	Canada 2,170; \$782	17,700	11,800	Canada 14,900; \$6,450

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>For imports, Customs value; for exports, free alongside ship value.

<sup>3</sup>In December 2004, the U.S. Harmonized Tariff Schedule was changed for manganites, manganates and permanganates to implement the United States-Australia Free Trade Agreement. Starting in 2005, sodium permanganate is tracked separately from the "manganites, manganates, and other permanganates" trade category.

Source: U.S. Census Bureau.